

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



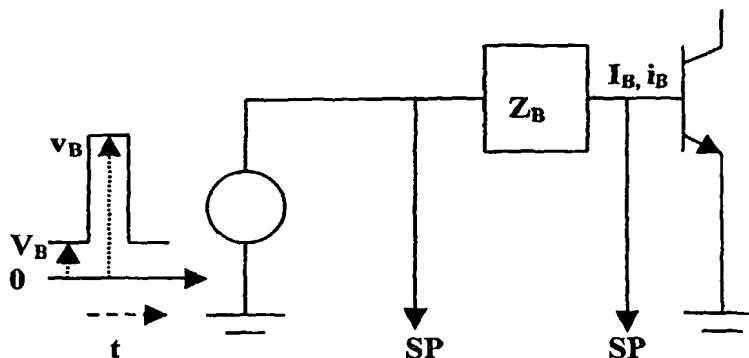
(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/034072 A1

- (51) International Patent Classification⁷: **G01R 31/26**
- (21) International Application Number:
PCT/GB2003/004473
- (22) International Filing Date: 13 October 2003 (13.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0223632.1 11 October 2002 (11.10.2002) GB
- (71) Applicant (for all designated States except US): **AOTI OPERATING COMPANY, INC.** [US/US]; 131 NW Hawthorne Avenue, Suite 207, Bend, OR 97701 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **LADBROOKE, Peter** [GB/GB]; Accent Optical Technologies Limited, Unit 1, Station Yard Industrial Estate, Wilbraham Road, Fulbourne, Cambridge CB1 5ET (GB). **GOODSHIP, Neil** [GB/GB]; Accent Optical Technologies Limited, Unit 1, Station Yard Industrial Estate, Wilbraham Road, Fulbourne, Cambridge CB1 5ET (GB).
- (74) Agent: **NOVAGRAAF PATENTS LIMITED**; The Crescent, 54 Blossom Street, York YO24 1AP (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SEMICONDUCTOR TESTING INSTRUMENT TO DETERMINE SAFE OPERATING AREA



(57) Abstract: An instrument for determination of the dc safe area of operation of a semiconductor device-under-test comprises a means to apply an adjustable bias at the input of a device-under-test, wherein the means comprises a dc biaser to apply a dc bias at a bias point within the safe operating limit, and a variable biaser subsequently to apply a variable bias comprising fast, superimposed rectangular bipolar pulses, and wherein the instrument further comprises means to measure the current response thereto so as to permit extrapolation of a detailed I-V response in the vicinity of the safe operating limit. A method of determination of the dc safe area of operation of a semiconductor device-under-test is also described.

WO 2004/034072 A1